CONSTRUCTION SPECIFICATION

NATURAL RESOURCES CONSERVATION SERVICE

DRY HYDRANT

Site Preparation

The dry hydrant access area and pipe location shall be cleared to the extent needed for pipe installation and access by fire fighting personnel and equipment. Clearing and brush removal for safe line-of-sight to the road shall be included. Clearing debris, logs, stumps, and other trash shall be burned, buried, removed from the site, or otherwise disposed of in accordance with state and local laws in a manner that does not interfere with hydrant installation or vehicle access. Any fence encountered within the construction area shall be carefully dismantled and laid back for later reconnection and relocation.

Excavation

Excavation for placement of the dry hydrant pipe and riser shall be done by trenching or other approved methods. Excavation should begin in the pond and proceed toward the hydrant location. Trenches having cuts greater than 5 feet shall be sloped to a stable slope above the 5-foot height or braced to avoid side wall caving and to improve backfill compaction. Care must be taken during underwater excavation to avoid ridges and valleys in the bottom grade. The bottom grade shall have a positive slope toward the water source.

Excavation and shaping that will facilitate and enhance easy on/off road access to the dry hydrant shall be done. Such excavation and shaping shall provide a nearly level, well drained site which will also facilitate operation and maintenance activities.

Fill Placement

If suitable, the material excavated from the pipe trench, access area shaping, or other source may be used for pipe backfill and other site filling and shaping activities. The fill material used in the trench must be free from all sod, roots, stones over two inches in diameter, frozen soil, and other objectionable material. Soil placed against plastic pipe shall be free of any isolated stones. A minimum of 2 feet of cover perpendicular to the slope is required. The soil surface shall be mounded over the pipe for settlement and to divert surface water.

Fill material above water level shall be placed in thin layers not exceeding 9 inches thick and compacted. Compaction around the pipe above water level shall be by hand tamping or by manually directed power tampers. The sides of the trench shall be scarified to improve bonding with the fill material and minimize settlement. Gravel should be used as backfill below water level.

Construction Materials

Pipe materials shall be of the specified type, size, and length as shown on the drawings. All pipe connections shall be air and water tight (airtight).

Pipe joint connections shall be cleaned and the appropriate cleaning and sealing material used according to the manufacturer's recommendations.

The intake screen shall be supported to assure that is has a minimum of 2 feet of clearance from the pond bottom.

Connectors acceptable to and approved by the local fire department shall be used.

Access

Vehicle access to and from the dry hydrant shall be provided for fire truck and pumper units. Access shall be all-weather and acceptable to the local fire department. It should be at least 14 feet wide for ease of movement by personnel and equipment during an emergency. When public roads are used for access, an all-weather road surface adjacent to the dry hydrant and completely off the public road is recommended for safety of emergency personnel and the public. The fire truck connection shall be within 10 feet of the edge of an all-weather access road and fire truck pumper connection shall be higher than the emergency spillway elevation if installed in a constructed impoundment.